

Abstract of the Disclosure

SAFETY DIAPHRAGM FOR A DIAPHRAGM PUMP

A safety diaphragm for a diaphragm pump, which makes it possible to detect a rupture of the diaphragm during operation or when at a standstill. The diaphragm has at least two diaphragm layers (1, 2) arranged lying one on top of the other, and preferably has an essentially circular periphery. The at least two diaphragm layers (1, 2) each has opposing inner and outer surfaces and a peripheral edge and are arranged so that the inner surfaces of the diaphragm layers are adjacent each other. The diaphragm has a clamping region (E), from the peripheral edge towards a center, running in a peripheral direction for fixing the diaphragm in a pump and has an adjacent operational region (A) from the clamping region (E) toward the center. The diaphragm layers (1, 2) are connected to each other so that they are sealed against penetration of liquid and/or gas between the diaphragm layers and so that there is atmospheric or subatmospheric pressure between the diaphragm layers (1, 2). The diaphragm, in one section of the clamping region (E), has a sensor region (S) where the diaphragm layers (1, 2) are formed so that, in the case of an increase in pressure between the diaphragm layers (1, 2), with an increase in the distance between the diaphragm layers, the layers in sensor region (S) deform more easily than in the other sections of the diaphragm.